

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
2 June 2005 (02.06.2005)

PCT

(10) International Publication Number
WO 2005/049607 A1

(51) International Patent Classification⁷: **C07D 403/14**, 403/12, A61K 39/395, 31/53, A61P 37/00, A61M 1/36, C07K 1/22, 16/24

WILB, Nicole [CA/CA]; 4865 Fulton, Montreal, Quebec H3W 1V2 (CA). GROUX, Brigitte [CA/CA]; 5078 Fabre, Montreal, Quebec H2J 3W4 (CA). GAGNON, Lyne [CA/CA]; 1973 de la Victoire, Laval, Quebec H7M 3E5 (CA).

(21) International Application Number:
PCT/CA2004/002003

(74) Agents: DUBUC, J. et al.; Goudreau Gage Dubuc, Stock Exchange Tower, 800 Place Victoria, Suite 3400, P.O. Box 242, Montreal, Quebec, H4Z 1E9 (CA).

(22) International Filing Date:
22 November 2004 (22.11.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(30) Priority Data:
60/524,021 24 November 2003 (24.11.2003) US

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): PROMETIC BIOSCIENCES INC. [CA/CA]; 6100 avenue Royalmount, Montreal, Quebec H4P 2R2 (CA).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/049607 A1

(54) Title: TRIAZINE DIMERS FOR THE TREATMENT OF AUTOIMMUNE DISEASES

(57) Abstract: Compounds containing two mono- or disubstituted triazine rings covalently linked by an organic linker, but not linked directly to each other, may be used to treat autoimmune diseases. Autoimmune diseases which are amenable to treatment with compounds of this invention include rheumatoid arthritis, systemic lupus erythematosus (SLE), idiopathic (immune) thrombocytopenia (ITP), glomerulonephritis and vasculitis. The present invention also relates to reducing drug toxicity which often accompanies traditional therapies for autoimmune diseases. The compounds may also be used to bind antibody *in vitro* or *ex vivo*.